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U.S. Department of the Interior • U.S. Geological Survey

# MINERAL INDUSTRY SURVEYS

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## COPPER IN AUGUST 1996

Mine production in August declined modestly, while smelter and primary refined copper production fell by 4.9% and 3.5%, respectively. The decline in smelter and refinery production resulted from closure of BHP Copper Co.'s San Manuel, AZ, smelter for 11 days following damage to its oxygen plant sustained during a power outage. According to a company spokesman, BHP had planned for a 9-day shutdown in October for routine maintenance and the damage from the power outage just moved up the closure.<sup>1</sup> Smelter production would have declined further had several other smelters not reported production increases. Meanwhile, Kennecott, which has experienced a series of problems since commissioning its new smelter in Utah in June 1995, hoped to have its flash smelting furnace fully operational by yearend, and its flash converter fully operational in January. It was anticipated that the unique flash converter, coupled with a launderer at the mouth of the flash furnace to capture fugitive emissions, would result in a state-of-the art facility that would capture 99.9% of smelter emissions. The smelter had been closed in April for 15 days for repairs.<sup>2</sup>

The 1996 amendment to the Safe Drinking Water Act was signed into law on August 6. The amendment regulates the amount of lead that can be released into drinking water. The amendment was well received by industry in that it regulates the release of lead and not the absolute level of lead used in copper-based alloys used in fixtures and fittings. Under the new regulation, water used in prescribed leaching tests must acquire no more than 11 parts per billion lead from plumbing fixtures and fittings. The current standard allowed for up to 8% lead in

plumbing fixtures. Typical fixtures contain 2-3% lead while some cast products contain up to 8% lead, the limit set in 1986. The new standard will allow engineering solutions to be applied in order to reduce lead levels in water, such as sealing of surfaces contacting water in order to prevent the leaching of exposed lead, and will not automatically require the use of lower-lead alloys.<sup>3</sup>

According to preliminary numbers for August released by the International Copper Study Group in its November 8 press release, world refined copper consumption for the first 8 months of 1996 was up by 1% compared with consumption in the same period in 1995, while mine and refined production were 6.8% and 7.5% higher, respectively. Calculations on the balance between refined copper production and consumption indicated a shift from an estimated production deficit of 32,000 tons for the first 6 months of 1996, to a net surplus of 76,000 tons for the first 8 months of the year. World inventories of copper held in London Metal Exchange and Comex warehouses fell to 243,000 tons in July, down 63,000 tons from yearend 1995, before rising to 296,000 tons in August. At the end of 1993, exchange warehouses held 667,000 tons.

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<sup>1</sup>Ward, A. BHP Copper Smelter Casualty of Outage. Am. Met. Mark., v. 104, No. 158, Aug. 15, 1996, p. 2.

<sup>2</sup>Platt's Metals Week. Kennecott Smelter at Full Production by Christmas. Sept. 2, 1996, p. 12.

<sup>3</sup>\_\_\_\_\_. Brass, Copper Industries Back Drinking Water Amendment. Aug. 19, 1996, p. 8.

TABLE 1  
SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES 1/

(Metric tons, unless noted)

	Source table 2/	1995 p/	1996		January- August
			July	August	
Production:					
Primary:					
Mine, recoverable	(2)	1,850,000	161,000 r/	159,000	1,260,000
Smelter 3/	(3)	1,240,000	103,000 r/	98,400	827,000
Refinery:					
Electrolytic:					
Domestic	(4)	1,310,000	115,000 r/	111,000	890,000
Foreign	(4)	77,300	8,090	7,370	70,800
Electrowon	(4)	539,000	48,200 r/	47,300	379,000
Total	(4)	1,930,000	172,000 r/	166,000	1,340,000
Secondary recoverable copper:					
Refineries	(5)	352,000	24,400	25,000	217,000
Ingot makers 4/	(5)	128,000	10,600	10,600	85,000
Brass and wire-rod mills	(5)	713,000	55,500 r/	60,600	486,000
Foundries, etc.	(5)	58,500	4,880	4,880	39,000
Consumption:					
Total apparent	(8)	2,540,000	228,000	NA	NA
Refined (reported)	(7)	2,530,000	196,000	211,000	1,740,000
Purchased copper-base scrap	(9)	1,650,000	127,000	136,000	1,100,000
Stocks at end of period:					
Total refined	(11)	164,000	157,000 r/	155,000	XX
Blister, etc.	(11)	174,000	154,000 r/	160,000	XX
Prices:					
U.S. producer cathode (cents per pound)	(12)	138.000	94.000	95.500	114.000
Imports:					
Ores and concentrates 5/	(14)	127,000	--	NA	NA
Refined	(14)	429,000	53,800	NA	NA
Exports:					
Ores and concentrates 5/	(15)	239,000	7,370	NA	NA
Refined	(15)	217,000	15,700	NA	NA

p/ Preliminary. r/ Revised. NA Not available. XX Not applicable.

1/ Data are rounded to three significant digits, except prices; may not add to totals shown.

2/ Numbers in parentheses refer to the detailed tables where these data are located.

3/ From domestic and foreign ores.

4/ Data no longer collected monthly; 1995 and 1996 data estimated based on 1994 monthly average.

5/ Copper content.

TABLE 2  
MINE PRODUCTION OF RECOVERABLE COPPER IN THE UNITED STATES 1/

(Metric tons)

State	1995 p/ 2/							1996
	July	August	September	October	November	December	Year total	January
Arizona	98,700	100,000	102,000	104,000	101,000	105,000	1,190,000	104,000
Other 3/	61,400	63,700	56,300	51,200	46,300	45,800	663,000	50,500 r/
Total	160,000	164,000	159,000	155,000	148,000	151,000	1,850,000	155,000 r/
State	1996							Jan. - Aug.
	February	March	April	May	June	July r/	August	
Arizona	93,000	108,000	103,000	107,000	106,000	104,000	102,000	828,000
Other 3/	47,900 r/	55,800 r/	53,500 r/	53,700 r/	56,100 r/	57,200	57,200	432,000
Total	141,000 r/	164,000 r/	157,000 r/	161,000 r/	163,000 r/	161,000	159,000	1,260,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Monthly data and the 1995 "Year total" excludes production by companies reporting on an annual basis.

3/ Includes production from Idaho, Michigan, Missouri, Montana, Nevada, New Mexico, Utah, and Wisconsin.

TABLE 3  
COPPER 1/ PRODUCED AT SMELTERS IN THE UNITED STATES, BY SOURCE 2/

(Metric tons, copper content)

Period	Domestic and foreign ores	Scrap	Total
1995: p/			
August	101,000	29,000	130,000
September	100,000	28,700	129,000
October	114,000	33,900	148,000
November	105,000	33,700	139,000
December	106,000	35,100	141,000
Jan.-Aug.	818,000	226,000	1,040,000
Year total	1,240,000	358,000	1,600,000
1996:			
January	113,000	29,200	142,000
February	108,000	29,800	138,000
March	101,000	33,300	134,000
April	105,000	28,200	133,000
May	94,300	30,600	125,000
June	104,000 r/	30,400	134,000 r/
July r/	103,000	32,300	136,000
August	98,400	27,500	126,000
Jan.-Aug.	827,000	241,000	1,070,000

p/ Preliminary. r/ Revised.

1/ Includes blister, anode and black copper from primary or secondary sources.

2/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 4  
PRODUCTION OF REFINED COPPER, BY SOURCE AND METHOD OF RECOVERY 1/

(Metric tons)

Period	Primary materials				Scrap			Total refined
	Electrolytically refined 2/		Electrowon	Total	Electro-lytically refined 2/	Fire refined	Total	
	Domestic 3/	Foreign						
1995: p/								
August	110,000	8,440	47,500	166,000	15,900	11,900	27,800	194,000
September	105,000	6,570	48,100	160,000	16,300	11,900	28,100	188,000
October	109,000	8,490	50,400	168,000	16,000	11,700	27,700	196,000
November	116,000	6,330	49,600	172,000	16,100	12,900	29,000	201,000
December	112,000	7,340	50,700	170,000	16,000	11,100	27,100	197,000
Jan.-Aug.	868,000	48,500	341,000	1,260,000	150,000	90,000	240,000	1,500,000
Year total	1,310,000	77,300	539,000	1,930,000	215,000	137,000	352,000	2,280,000
1996:								
January	117,000	11,300	47,500 r/	176,000	14,300	13,400	27,700	204,000
February	107,000	9,990	43,500 r/	161,000 r/	13,700	12,800	26,400	187,000
March	112,000	9,570	45,900 r/	168,000 r/	14,200	14,000	28,200	196,000
April	115,000	9,790	47,400 r/	173,000 r/	14,200	10,400	24,700	197,000
May	112,000	9,500	50,700 r/	172,000	16,900	12,700	29,600	202,000 r/
June	98,800 r/	5,180	48,300 r/	152,000 r/	17,300	13,700	30,900	183,000 r/
July	115,000 r/	8,090	48,200 r/	172,000 r/	18,100	6,310	24,400	196,000 r/
August	111,000	7,370	47,300	166,000	14,000	11,000	25,000	191,000
Jan.-Aug.	890,000	70,800	379,000	1,340,000	123,000	94,300	217,000	1,560,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Based on source of material at smelter level.

3/ Includes fire-refined copper.

TABLE 5  
COPPER RECOVERABLE IN UNALLOYED AND ALLOYED FORM FROM PURCHASED COPPER-BASED SCRAP 1/

(Metric tons, copper content)

Period	Refineries 2/		Ingot makers 3/		Brass and wire-rod mills		Foundries, etc. 4/		Total 5/
	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
1995: p/									
August	9,750	18,100	2,840	7,790	51,900	4,060	2,130	2,750	99,300
September	9,160	19,000	2,840	7,790	52,500	4,550	2,130	2,750	101,000
October	9,500	18,200	2,840	7,790	56,300	4,090	2,130	2,750	104,000
November	10,100	18,900	2,840	7,790	54,600	3,650	2,130	2,750	103,000
December	8,870	18,200	2,840	7,790	45,400	3,650	2,130	2,750	91,700
Jan.- Aug.	74,100	166,000	22,700	62,300	455,000	33,300	17,000	22,000	852,000
Year total	112,000	240,000	34,000	93,500	664,000	49,300	25,500	33,000	1,250,000
1996:									
January	11,100	16,600	2,840	7,790	59,400	3,350	2,130	2,750	106,000
February	9,790	16,600	2,840	7,790	54,000	2,980	2,130	2,750	98,900
March	11,100	17,200	2,840	7,790	57,600	2,660	2,130	2,750	104,000
April	8,200	16,500	2,840	7,790	57,400	4,240	2,130	2,750	102,000
May	10,000	19,600	2,840	7,790	60,100 r/	4,230	2,130	2,750	109,000 r/
June	10,900	20,000	2,840	7,790	58,700 r/	4,960	2,130	2,750	110,000
July	6,010	18,400	2,840	7,790	51,600 r/	3,880	2,130	2,750	95,400 r/
August	8,310	16,700	2,840	7,790	56,800	3,870	2,130	2,750	101,000
Jan.- Aug.	75,400	142,000	22,700	62,300	456,000	30,200	17,000	22,000	827,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Electrolytically refined and fire-refined scrap based on source of material at smelter level.

3/ Data no longer collected monthly; 1995 and 1996 data estimated based on 1994 annual data.

4/ Estimate based on 1994 annual data.

5/ Does not include an estimate, based on reported 1994 data. This comprises a monthly average of 2,930 tons from new scrap and 2,340 tons from old scrap of copper recovered from scrap other than copper-base.

TABLE 6  
PRODUCTION, SHIPMENTS, AND STOCKS OF BRASS AND WIRE-ROD MILL SEMIFABRICATES 1/

(Metric tons, gross weight)

Period	Production		Shipments		Stocks, end of period	
	Brass mills	Wire rod mills	Brass mills	Wire rod mills	Brass mills	Wire rod mills
1995: p/						
August	114,000	148,000	113,000	163,000	49,100	58,500
September	116,000	163,000	116,000	163,000	49,600	57,600
October	120,000	161,000	118,000	154,000	51,300	64,900
November	113,000	143,000	118,000	141,000	46,400	67,300
December	105,000	134,000	98,600	132,000	52,500	69,100
Jan.- Aug.	965,000	1,220,000	980,000	1,230,000	XX	XX
Year total	1,420,000	1,820,000	1,430,000	1,820,000	XX	XX
1996:						
January	120,000	146,000	122,000	147,000	50,100	68,200
February	128,000	155,000	130,000	158,000	48,800	64,900
March	144,000	173,000	142,000	161,000	51,300	76,200
April	131,000	158,000	133,000	177,000	49,400	57,600
May	130,000	174,000	129,000	166,000	51,000	65,200
June	136,000	164,000	132,000	152,000	54,900	76,900
July	114,000	141,000	116,000 r/	153,000	52,300	64,600
August	130,000	144,000	130,000	158,000	52,200	50,100
Jan.- Aug.	1,030,000	1,250,000	1,030,000	1,270,000	XX	XX

p/ Preliminary. r/ Revised. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 7  
CONSUMPTION OF REFINED COPPER 1/

(Metric tons)

Period and item	Wire rod mills	Brass mills 2/	Other plants 3/	Total
1995: p/				
August	171,000	43,500	3,920	219,000
September	169,000	44,400	3,920	218,000
October	163,000	44,000	3,920	211,000
November	150,000	44,400	3,920	198,000
December	132,000	40,700	3,920	176,000
Jan.-Aug.	1,330,000	359,000	31,400	1,720,000
Year total	1,950,000	533,000	47,000	2,530,000
1996:				
January	155,000	45,100	3,920	204,000
February	166,000	47,200	3,920	217,000
March	183,000	56,400	3,920	244,000
April	164,000	47,500	3,920	215,000
May	185,000	47,500	3,920	236,000
June	165,000	49,600	3,920	219,000
July	148,000	43,500 r/	3,920	196,000
August:				
Cathodes	156,000	31,300	1,120	188,000
Wire bars	--	W	W	W
Ingots and ingot bars	--	1,990	1,750	3,730
Cakes and slabs	--	7,300	W	7,300
Billets and other	--	10,300	1,060	11,400
Total	156,000	50,900	3,920	211,000
Jan.-Aug.	1,320,000	388,000	31,400	1,740,000

p/ Preliminary. r/Revised. W Withheld to avoid disclosing company proprietary data; included in "Billets and other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ In 1994, brass mills consumed 2,670 tons of refined lead, 652 tons of pig tin, 3,340 tons of refined nickel, and 90,700 tons of slab zinc.

3/ Estimated consumption by ingot makers, chemical plants, foundries, and miscellaneous manufacturers; based on 1994 annual data.

TABLE 8  
U.S. APPARENT CONSUMPTION OF COPPER 1/

(Metric tons)

Period	Refined copper production	Copper in old scrap 2/	Net refined imports	Stock change during period	Apparent consumption
1995: p/					
August	166,000	35,000	15,200	9,190	207,000
September	160,000	36,400	16,500	6,270	207,000
October	168,000	35,200	29,600	(2,050)	235,000
November	172,000	35,400	31,900	5,380	234,000
December	170,000	34,800	30,800	30,900	205,000
Jan.-Jul.	1,090,000	267,000	87,300	(5,150)	1,450,000
Year total	1,930,000	444,000	211,000	44,500	2,540,000
1996:					
January	176,000	32,900	29,400	28,600	210,000
February	161,000 r/	32,500	24,800	(21,300)r/	239,000
March	168,000 r/	32,700	35,500	(7,160)r/	243,000
April	173,000 r/	33,600	37,300	10,800 r/	233,000 r/
May	172,000	36,700	46,000	(26,400)r/	282,000 r/
June	152,000 r/	37,900	33,900	(7,580)r/	232,000
July	172,000 r/	35,200	38,000	16,600 r/	228,000
August	166,000	33,400	NA	(1,960)	NA
Jan.-Jul.	1,170,000	241,000	245,000	(6,470)	1,670,000

p/ Preliminary. r/ Revised. NA Not available.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes reported monthly production of copper from old scrap of copper-base and of non-copper-base materials and estimates for annual reporters based on 1994 data.

TABLE 9  
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP 1/

(Metric tons, gross weight)

Period	Smelters and refineries		Ingot makers 2/		Brass and wire-rod mills 3/		Foundries, etc. e/		Total scrap used
	New scrap 2/	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
1995: p/									
August	11,900	30,000	3,800	11,600	65,100	4,790	2,400	3,100	133,000
September	10,600	31,600	3,800	11,600	64,900	5,460	2,400	3,100	133,000
October	10,800	29,800	3,800	11,600	70,100	4,950	2,400	3,100	136,000
November	12,300	29,400	3,800	11,600	68,300	4,380	2,400	3,100	135,000
December	10,100	32,100 r/	3,800	11,600	57,100	4,460	2,400	3,100	125,000 r/
Jan.- Aug.	84,600	262,000	30,400	92,700	567,000	40,100	19,200	24,800	1,120,000
Year total	128,000	385,000	45,600	139,000	827,000	59,400	28,800	37,200	1,650,000
1996:									
January	12,600	26,600	3,800	11,600	74,300	4,100	2,400	3,100	138,000
February	10,700	28,200	3,800	11,600	68,200	3,830	2,400	3,100	132,000
March	11,700	32,200	3,800	11,600	72,300	3,570	2,400	3,100	141,000
April	9,680	26,800	3,800	11,600	71,900	5,000	2,400	3,100	134,000
May	10,800	31,400	3,800	11,600	75,500 r/	5,100	2,400	3,100	144,000 r/
June	13,200	36,300	3,800	11,600	73,500 r/	5,990 r/	2,400	3,100	150,000 r/
July	8,120	27,900 r/	3,800	11,600	65,600 r/	4,790	2,400	3,100	127,000
August	10,000	28,000	3,800	11,600	72,100	4,880	2,400	3,100	136,000
Jan.- Aug.	86,800	237,000	30,400	92,700	573,000	37,300	19,200	24,800	1,100,000

e/ Estimated. p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Data for 1995 and 1996 is estimated from 1994 annual data.

3/ Consumption at brass and wire-rod mills assumed equal to receipts.

TABLE 10  
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP 1/ 2/

(Metric tons, gross weight)

Scrap type and processor	1995 p/		1996			
	Jan.-Aug.	Year total	June	July	August	Jan.-Aug.
No. 1 wire and heavy:						
Smelters and refiners	99,100	145,000	13,500	5,600	10,200	87,700
Brass and wire-rod mills	255,000	375,000	32,500	27,400	28,200	243,000
No. 2 mixed heavy and light:						
Smelters and refiners	140,000	210,000	22,200	16,700 r/	14,400	132,000
Brass and wire-rod mills	24,700	33,400	3,800	2,640	2,880	24,300
Total unalloyed scrap:						
Smelters and refiners	239,000	355,000	35,700	22,300 r/	24,700	220,000
Brass mills	280,000	408,000	36,300	30,000	31,000	267,000
Red brass: 3/						
All plants	16,700	24,500	1,930	1,930	2,110	15,900
Leaded yellow brass:						
All plants	238,000	346,000	32,600	31,800	33,100	253,000
Yellow and low brass:						
Smelters and refiners	(4/)	(4/)	(4/)	(4/)	(4/)	(4/)
Brass mills	30,200	47,500	4,240	3,950	4,290	34,400
Cartridge cases and brass:						
Smelters and refiners	--	--	--	--	--	--
Brass mills	35,100	49,400	3,930	2,240	3,680	30,000
Auto radiators:						
Smelters and refiners	12,900	19,400	1,620	1,620	1,620	13,000
Bronzes:						
Smelters and refiners	--	--	--	--	--	--
Brass mills	7,730	11,300	905	555	1,050	7,290
Nickel-copper alloys:						
Smelters and refiners	--	--	--	--	--	--
Brass mills	11,900	17,700	1,010	1,490	3,230	15,000
Low grade & residues:						
Smelters and refiners	55,000	80,900	6,960	7,210	6,500	51,300
Other alloy scrap: 5/						
Smelters and refiners	26,900	39,200	3,720	3,330	3,670	27,500
Brass mills	2,630	3,920	428	335 r/	370	2,990
Total alloyed scrap:						
Smelters and refiners	110,000	162,000	14,200	14,100	13,700	107,000
Brass mills	327,000	478,000	43,200	40,400 r/	45,900	344,000
Total scrap:						
Smelters and refiners	349,000	517,000	49,900	36,400 r/	38,300	327,000
Brass and wire-rod mills	607,000	886,000	79,400	70,400 r/	77,000	611,000

p/ Preliminary. r/ Revised.

1/ Does not include: consumption by ingot makers, foundries, chemical plants and miscellaneous manufacturers, estimated to total about 20,800 tons of scrap per month in 1995; consumption of home scrap at brass mills which averaged 57,200 tons per month in 1994; includes estimated consumption of 337 tons per month by several copper smelting plants that reported only on an annual basis in 1995.

2/ Data are rounded to three significant digits; may not add to totals shown.

3/ Includes composition turnings, silicon bronze, zincy bronze, railroad car boxes, cocks and faucets, gilding metal and commercial bronze.

4/ Withheld to avoid disclosing company proprietary data; included in "Other alloy scrap."

5/ Includes refinery brass, beryllium copper, phosphor copper and aluminum bronze.

TABLE 11  
COPPER STOCKS AT END OF PERIOD 1/

(Metric tons)

Period	Crude copper 2/	Refined copper					LME 6/	Total refined
		Refineries 3/	Wire rod mills 3/	Brass mills 3/	Other 4/	Comex 5/		
1995: p/								
August	176,000	36,200	27,900	12,000	4,100	14,900	28,000	123,000
September	170,000	38,500	24,900	11,500	4,100	10,100	40,300	129,000
October	180,000	39,600	24,900	12,100	4,100	5,540	41,200	127,000
November	170,000	37,900	26,700	11,700	4,100	4,900	47,500	133,000
December	174,000	38,000	24,800	7,110	4,100	21,500	68,200	164,000
1996:								
January	172,000	35,700	34,500	10,400	4,100	11,000	96,700	192,000
February	177,000 r/	31,700 r/	22,600	11,200	4,100	11,700	89,600	171,000
March	153,000 r/	33,800	19,500	9,820	4,100	12,600	84,000	164,000
April	171,000 r/	35,600 r/	25,500	11,300	4,100	18,800	79,400	175,000
May	166,000 r/	35,500 r/	19,200	9,840 r/	4,100	12,000	67,500	148,000
June	162,000 r/	33,500 r/	13,100	12,600 r/	4,100	6,880	70,400	141,000
July	154,000 r/	34,900 r/	29,900	13,500 r/	4,100	16,100	58,700	157,000 r/
August	158,000	31,700	25,900	13,800	4,100	20,100	59,600	155,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Copper content of blister and other materials in transit and in process of refining.

3/ Stocks of refined copper as reported; no estimates are made for non-respondents.

4/ Monthly estimates based on reported and 1994 annual data, comprising stocks at secondary smelters, chemical plants, foundries, and miscellaneous manufacturers.

5/ Commodity Exchange Inc., New York.

6/ London Metal Exchange Ltd., U.S. warehouses.

TABLE 12  
AVERAGE PRICE OF COPPER IN THE UNITED STATES AND  
ON THE LONDON METAL EXCHANGE

(Cents per pound)

Period	U.S. producers delivered price		Comex first position 3/	L.M.E. cash price Grade A
	Cathode 1/	Wirebar 2/		
1995:				
August	141.128	149.774	137.774	137.718
September	135.518	144.138	132.138	132.216
October	131.380	139.995	127.996	127.582
November	139.860	148.500	136.500	134.986
December	135.103	143.778	131.778	132.683
Average	138.333	146.724	134.717	133.122
1996:				
January	121.431	130.090	118.091	118.622
February	120.020	128.668	116.668	115.077
March	121.540	130.200	118.200	116.140
April	122.628	131.286	119.286	117.707
May	126.667	135.327	123.327	120.527
June	107.828	116.538	104.488	98.447
July	94.007	102.693	90.667	90.006
August	95.479	104.139	92.139	91.072
Average	113.700	122.368	110.358	108.450

1/ Listed as "U.S. producer cathode."

2/ Listed as "Electrolytic wirebar (Warrenton Refining Co.)."

3/ Listed as "Comex high grade first position."

Sources: Platt's Metals Week and American Metal Market.



TABLE 13  
NEW YORK AVERAGE BUYING PRICES FOR COPPER SCRAP

(Cents per pound)

Month	Brass mills No. 1 scrap	Refiners No. 2 scrap	Dealers (New York)	
			No. 2 scrap	Red brass turnings and borings
1995:				
August	126.68	110.77	95.00	68.00
September	122.59	105.99	94.10	68.00
October	120.17	104.50	92.27	67.00
November	125.91	106.96	91.80	66.00
December	120.89	103.96	92.00	66.00
Average	123.28	104.73	91.26	63.38
1996:				
January	112.46	95.09	87.98	57.86
February	111.85	93.83	89.75	57.00
March	113.06	96.54	92.53	57.66
April	114.20	96.99	84.43	58.00
May	116.25	97.10	84.59	57.84
June	96.95	83.00	77.85	55.35
July	88.58	69.76	64.43	46.79
August	90.85	73.93	64.00	46.09
Average	105.53	88.28	80.69	54.57

Source: American Metal Market.

TABLE 14  
U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY CLASS 1/

(Metric tons, copper content)

Country or territory	Ore and concentrate			Matte, ash and precipitates			Blister and anodes			Refined		
	1995	1996		1995	1996		1995	1996		1995	1996	
		July	Jan.-July		July	Jan.-July		July	Jan.-July		July	Jan.-July
Brazil	--	--	--	--	--	--	--	--	--	15,500	2,000	13,600
Canada	(2/)	--	4,370	590	14	175	40,000	--	2,610	283,000	24,100	208,000
Chile	80,400	--	52,400	--	--	--	38,000	--	28,800	29,100	15,200	51,200
Germany	--	--	--	--	--	--	--	--	--	12,300	--	(2/)
Japan	--	--	--	4	--	--	(2/)	--	--	7,740	662	1,940
Malaysia	--	--	--	55	--	79	--	--	--	--	--	--
Mexico	11,700	--	275	2,190	237	1,360	2,350	--	18,300	58,600	4,370	24,400
Peru	34,900	--	--	--	--	--	10,400	--	--	9,860	6,360	28,400
Russia	--	--	--	--	--	--	--	--	--	11,600	510	4,870
South Africa	1	--	--	11	--	--	--	--	638	2	2	2
Spain	--	--	--	--	--	--	3,260	480	2,210	--	--	--
Taiwan	--	--	--	1	--	19	--	--	--	--	--	--
Other	1	--	3	2	--	1	--	--	1	618	525	5,150
Total	127,000	--	57,100	2,860	250	1,630	94,100	480	52,600	429,000	53,800	337,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 15  
U.S. EXPORTS OF COPPER (UNMANUFACTURED), BY CLASS 1/

(Metric tons, copper content)

Country or territory	Ore and concentrate			Matte, ash and precipitates			Blister and anodes			Refined		
	1996			1996			1996			1996		
	1995	July	Jan.-July	1995	July	Jan.-July	1995	July	Jan.-July	1995	July	Jan.-July
Belgium	1,980	--	--	1,330	--	3	81	239	239	2,260	2	37
Canada	123,000	7,350	51,200	30,400	2,060	20,800	24,800	1,140	11,500	22,900	4,150	18,300
China	37,100	--	51,800	17	--	--	211	6	26	5,130	--	--
Germany	--	1	1	152	--	--	84	20	341	629	16	78
Hong Kong	--	--	16	48	--	29	650	--	372	4,710	2	379
India	--	--	--	151	--	271	36	--	--	138	--	7
Italy	--	--	8	--	--	--	245	--	424	1,580	3	2,150
Japan	53,500	--	5,530	1,880	71	1,730	363	3	390	52,800	4,400	16,200
Korea, Republic of	5,520	--	2	10	--	10	1,440	--	420	11,200	818	2,330
Malaysia	--	--	--	--	--	--	--	--	--	4,110	344	4,740
Mexico	160	--	2,340	763	514	751	219	12	224	2,710	58	2,610
Peru	1,180	--	1,750	9	--	--	--	--	--	--	--	129
Philippines	16,000	--	--	--	--	--	20	3	11	3	--	--
Singapore	5	--	--	18	--	--	39	--	40	12,700	--	1,020
Taiwan	--	--	--	201	--	--	137	--	161	75,000	5,060	26,800
Thailand	34	--	--	--	--	--	124	--	58	18,700	850	17,000
Venezuela	--	--	--	--	--	--	860	--	6	27	--	20
Other	341	20	238	69	21	227	190	--	188	2,890	43	579
Total	239,000	7,370	113,000	35,100	2,660	23,900	29,500	1,430	14,400	217,000	15,700	92,500

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 16  
U.S. COPPER SCRAP TRADE 1/

(Metric tons, gross weight)

Country or territory	Imports						Exports					
	Unalloyed			Alloyed			Unalloyed			Alloyed		
	1996			1996			1996			1996		
	1995	July	Jan.-July	1995	July	Jan.-July	1995	July	Jan.-July	1995	July	Jan.-July
Belgium	11	--	--	294	--	--	2,730	1,790	4,630	32	--	--
Canada	36,600	3,140	22,500	64,600	4,330	34,000	110,000	7,180	63,200	30,300	1,490	15,900
Chile	9,270	993	6,730	66	19	129	--	--	--	--	--	3
China	--	--	--	21	--	62	28,000	1,010	8,420	7,380	19	1,130
Colombia	325	4	411	1,280	185	2,120	--	--	--	--	--	--
Costa Rica	848	140	864	524	68	267	--	--	--	--	--	--
Dominican Republic	702	6	248	1,860	115	1,270	--	--	--	--	--	--
Ecuador	252	--	--	1,070	90	552	--	--	--	--	4	4
Germany	--	--	3	64	57	102	1,580	124	415	1,190	17	405
Hong Kong	--	--	--	23	--	111	31,400	2,370	18,700	7,810	812	5,070
India	--	--	--	--	--	--	7,100	114	3,500	25,400	1,760	10,500
Japan	--	--	--	124	17	19	20,100	1,780	9,870	3,870	349	1,980
Korea, Republic of	--	--	--	14	--	--	10,300	411	3,850	1,480	--	193
Mexico	32,800	2,680	18,600	50,500	2,900	28,200	6,470	--	2,390	37	--	--
Panama	1,170	82	518	776	117	654	--	--	--	--	--	--
Peru	166	76	481	116	125	363	--	--	--	--	--	--
Russia	--	--	--	533	127	216	--	--	--	--	--	--
Taiwan	--	--	32	2,940	19	831	1,680	107	490	832	102	560
Thailand	--	--	--	8	--	36	--	19	37	827	111	433
Ukraine	--	--	--	152	126	396	--	--	--	--	--	--
United Kingdom	111	--	--	201	140	752	338	122	194	309	--	21
Venezuela	3,260	122	2,080	2,860	144	1,750	--	--	--	--	--	--
Other	2,570 r/	165	1,970	5,530 r/	326	3,810	3,590 r/	39	923	1,180 r/	19	298
Total	88,100	7,410	54,400	134,000	8,900	75,700	223,000	15,100	117,000	80,600	4,680	36,500

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.